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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/931,615	09/16/97	KAWATA	T 041464-5018

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EXAMINER	
LE, H	

ART UNIT	PAPER NUMBER
2743	

DATE MAILED: 06/16/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/931,615

Applicant(s)
Kawata et al.

Examiner
Huyen Le

Group Art Unit
2743

☒ Responsive to communication(s) filed on Apr 21, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 2-13 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 2-13 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on 4/21/99 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103[©] and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (JP 405207590) in view of Sariti (U.S. patent 3,079,472).

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Regarding claim 4, Takahashi teaches a speaker unit which comprises a diaphragm (9), a cylindrical voice coil (8) secured on a center of the diaphragm, and a magnetic circuit formed by a top plate (3), a magnet (6) and a back plate (7) having an integrally formed upright pole (7a) on its center.

Takahashi does not specifically teach a rectangular shape for the frame, the top plate, the magnet and the back plate as claimed.

Sariti shows the frame (see the base of the housing 48) with a hole in its center, the top plate (12), the magnet (33) and the back plate (14) in a rectangular shape (figure 10).

Since Takahashi does not restrict to any shape for the frame and the magnetic circuit; it therefore would have been obvious to one skilled in the art to provide the magnetic circuit and the frame, as taught by Sariti, in a rectangular shape for the Takahashi system.

Further, Takahashi in view of Sariti do not specifically teach the diaphragm in an elliptical shape. However, Takahashi and Sariti do not restrict to any shape for the diaphragm. Also, the examiner takes the Office Notice that providing an elliptical shape for the diaphragm is very well-known in the art.

Therefore, it would have been obvious to one skilled in the art to provide an elliptical shape for the diaphragm of the system of Takahashi in view of Sariti for attaching the speaker

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to any opening such as a frame or a baffle with an elliptical shape.

Each of the top plate, the magnet, and the backplate of Sariti has a width that is narrower than that of the frame in its shorter axis (see figure 3).

In addition, Sariti shows the cylindrical voice coil (50) which has a circular cross section (see the circular openings 16, 34, and 20 in figure 1, and the air gap 30 in figure 2).

Regarding claim 2, Sariti shows the frame structure, the top plate, the magnet and the back plate which are arranged in parallel relation with one another.

Regarding claim 3, Takahashi in view of Sariti do not teach that the speaker unit is installed on either side of a television display on a television set.

However, the examiner takes the Office Notice that providing a speaker unit to be installed on either side of a television is very well-known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the speaker unit of Takahashi in view of Sariti to be installed in either side of the television for applying the speaker system to an electronic device.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Sariti as applied to claim

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4 above, and further in view of Lee et al. (GP 2,278,251) or Numa (JP 355118299).

Takahashi in view of Sariti do not teach a magnetic case as claimed. However, providing a magnetic case for housing the magnetic circuit is well-known in the art.

Lee or Numa shows a magnetic case (111 in Lee and 26 in Numa) as claimed.

Therefore, it would have been obvious to one skilled in the art to provide the magnetic case, as taught by Lee or Numa, for covering the magnetic circuit of Takahashi in view of Sariti to reduce the leakage magnetic flux.

4. Claims 6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sariti (U.S. patent 3,079,472) in view of Nakamura (U.S. patent 4,969,196).

Regarding claim 6, Sariti teaches a speaker unit which comprises a diaphragm (52), a cylindrical voice coil (50) secured on a center of the diaphragm, a rectangular frame (see the base of the housing 48 in figure 1), and a magnetic circuit formed by a rectangular top plate (12), a rectangular magnet (33) and a rectangular back plate (14) having an upright pole (24) on its center.

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In addition, Sariti shows the cylindrical voice coil (50) which has a circular cross section (see the circular openings 16, 34, and 20 in figure 1, and the air gap 30 in figure 2).

Sariti does not specifically teach the diaphragm and the frame in an elliptical shape. However, Sariti does not restrict to any shape for the diaphragm and the frame. Also, providing an oval or elliptical speaker is very well-known in the art.

Nakamura shows an oval or elliptical speaker (96, figures 11, 13).

Therefore, it would have been obvious to one skilled in the art to provide an elliptical shape, as taught by Nakamura, for the speaker of Sariti such as providing an elliptical diaphragm and a frame with an elliptical opening to receive the diaphragm for an alternate choice of providing different types of speakers.

As shown in figure 3, each of the top plate, the magnet, and the backplate of Sariti has a width that is narrower than that of the frame in its shorter axis.

Regarding claim 8, Sariti shows the frame structure, the top plate, the magnet and the back plate which are arranged in parallel relation with one another.

Regarding claim 9, Takahashi in view of Sariti do not teach that the speaker unit is installed on either side of a television display on a television set.

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However, the examiner takes the Office Notice that providing a speaker unit to be installed on either side of a television is very well-known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the speaker unit of Takahashi in view of Sariti to be installed in either side of the television for applying the speaker system to an electronic device.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sariti as applied to claim 6 above, and further in view of Lee et al. (GP 2,278,251) or Numa (JP 355118299).

Regarding claim 5, Takahashi in view of Sariti do not teach a magnetic case as claimed. However, providing a magnetic case for housing the magnetic circuit is well-known in the art.

Lee or Numa shows a magnetic case (111 in Lee and 26 in Numa) as claimed.

Therefore, it would have been obvious to one skilled in the art to provide the magnetic case, as taught by Lee or Numa, for covering the magnetic circuit of Takahashi in view of Sariti to reduce the leakage magnetic flux.

6. Claim 10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Sariti and further in view of Nakamura (U.S. patent 4,969,196).

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Regarding claim 10, Takahashi teaches a speaker unit which comprises a diaphragm (9), a cylindrical voice coil (8) secured on a center of the diaphragm, a frame (1), and a magnetic circuit formed by a top plate (3), a magnet (6) and a back plate (7) having an integrally formed upright pole (7a) on its center.

Takahashi does not specifically teach a rectangular shape for the top plate, the magnet and the back plate as claimed.

Sariti shows the top plate (12), the magnet (33) and the back plate (14) in a rectangular shape (figure 10), and the frame (48) with a hole in its center.

Since Takahashi does not restrict to any shape for the magnetic circuit; it therefore would have been obvious to one skilled in the art to provide the magnetic circuit, as taught by Sariti, in a rectangular shape for the Takahashi system.

In addition, Sariti shows the cylindrical voice coil (50) which has a circular cross section as claimed (see the circular openings 16, 34, and 20 in figure 1, and the air gap 30 in figure 2).

Further, Takahashi in view of Sariti do not specifically teach the diaphragm and the frame in an elliptical shape. However, Takahashi and Sariti do not restrict to any shape for the diaphragm and the frame. Also, providing an oval or elliptical speaker is very well-known in the art.

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Nakamura teaches an oval or elliptical speaker (96, figures 11, 13).

Therefore, it would have been obvious to one skilled in the art to provide an elliptical shape, as taught by Nakamura, for the speaker of Takahashi in view of Sariti such as providing an elliptical diaphragm and an elliptical frame for an alternate choice of providing different types of speakers.

As shown in figure 3, each of the top plate, the magnet, and the backplate of Sariti has a width that is narrower than that of the frame in its shorter axis.

Regarding claim 12, Sariti shows the frame structure, the top plate, the magnet and the back plate which are arranged in parallel relation with one another.

Regarding claim 13, Takahashi in view of Sariti do not teach that the speaker unit is installed on either side of a television display on a television set.

However, the examiner takes the Office Notice that providing a speaker unit to be installed on either side of a television is very well-known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the speaker unit of Takahashi in view of Sariti to be installed in either side of the television for applying the speaker system to an electronic device.

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7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Sariti and Nakamura as applied to claim 10 above, and further in view of Lee et al. (GP 2,278,251) or Numa (JP 355118299).

Takahashi in view of Sariti and Nakamura do not teach a magnetic case as claimed. However, providing a magnetic case for housing the magnetic circuit is well-known in the art.

Lee or Numa shows a magnetic case (111 in Lee and 26 in Numa) as claimed.

Therefore, it would have been obvious to one skilled in the art to provide the magnetic case, as taught by Lee or Numa, for covering the magnetic circuit of Takahashi in view of Sariti to reduce the leakage magnetic flux.

Response to Arguments

8. Applicant's arguments filed 04/21/99 have been fully considered but they are not persuasive.

Responding to the arguments, the examiner refers back to the Office Action. Further, the Applicant should note that Sariti does teach a rectangular shape for the speaker (see col. 2, lines 56-59).

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Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Le whose telephone number is (703) 305-4844. The examiner can normally be reached on Monday through Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications
intended for entry)

Or:

(703) 305-9508 (for informal or draft
communications, please label "PROPOSED" or
"DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA.,
Sixth Floor (Receptionist).

HL
June 11, 1999


HUYEN LE
PRIMARY EXAMINER